

Claims

1. A combined mobile container inspection system, comprising: a radiation source (8); a chassis (1) and a remote control device; a rotatable deck (2) is provided at an end of the upper surface of said chassis and rotatable with respect to said chassis, and provided with a parallelogram bracket (12) formed by a hingedly-connected four-bar linkage mechanism, the cross link of the parallelogram bracket extends to form a horizontal cross arm (3) with a detector, the other end of said horizontal cross arm (3) is connected with a vertical upright arm (4), which is vertical or parallel to said horizontal cross arm (3), with a detector via an drawing mechanism; and wherein a sliding deck (7) is provided at the rear end of the rotatable deck and movable upwardly and downwardly, said sliding deck is provided, in turn, with the radiation source (8), the ray generated therefrom is always right in the face of the detectors provided in the horizontal cross arm and vertical upright arm, calibrator (9) and collimator (10); the middle part of the upper surface of the chassis is provided with a device cabin, in which image acquisition module, operation inspector and modulation cabin are provided; wheels (11) provided with driving device (13) are mounted on the lower surface of said chassis; the rotatable deck (2) on the upper surface of the chassis (1) rotates 90 degree when the container is inspected; a gantry frame is composed of the parallelogram bracket (12), horizontal cross arm (3) and vertical upright arm (4), the sliding deck (7) is moved downwardly which lowers the target point of the ray irradiated from the radiation source (8), calibrator (9) and collimator (10) to enlarge the scanning range, the control signal is outputted from a remote control device, driving the gantry frame on the upper surface of the chassis (1) to move paralleledly across the inspected container, the sector formed of the X ray irradiated from the radiation source (8) penetrates through the inspected container at

low position and is converted into electrical signal inputting into the image acquisition module in the device cabin (6) after the sector is received by the detectors in the horizontal cross arm (3) and vertical upright arm (4), the image signal is transferred from the image acquisition module to the operation inspector and the inspection result is displayed by the display device of the remote control.

2. The combined mobile container inspection system according to claim 1, wherein said sliding deck (7) is comprised ,in two parts, of a fixed frame (7-2) and a sliding frame (7-1) provided with the radiation source (8), calibrator (9) and collimator (10), the fixed frame (7-2) is fixed to the rotatable deck (2), the both side ends of the inner side of the fixed frame (7-2) are provided with sliding rail (7-3), the sliding frame (7-1) is embeddedly provided on the sliding rail (7-3) of the fixed frame (7-2), a driving mechanism (7-4), which moves the sliding frame (7-1) upwardly and downwardly, is connected between the fixed frame (7-2) and the sliding frame (7-1).

3. The combined mobile container inspection system according to claim 2, wherein, said driving mechanism (7-4) is composed of a screw thread pair which comprises a drive screw provided on the fixed frame (7-2) and a nut fixed within the sliding frame (7-1).

4. The combined mobile container inspection system according to claim 2, wherein, said driving mechanism (7-4) comprises a hydraulic pressure oil cylinder provided between the fixed frame (7-2) and the sliding frame (7-1).

5. The combined mobile container inspection system according to any one of claims 1-4, wherein, said driving device (13) comprises a motor and a decelerator which are fixed with the lower surface of the chassis (1), the motor shaft is connected with the decelerator, the output shaft of which is connected with the wheels (11) directly provided on the

rail or directly contacting the ground surface.

6. The combined mobile container inspection system according to any one of claims 1-4, wherein, said driving device (13) have hydraulic pressure motor which is fixed to the lower surface of the chassis (1), the output shaft of the hydraulic pressure motor is connected with the wheels (11) directly provided on the rail or directly contacting the ground surface.

7. The combined mobile container inspection system according to claim 5, wherein, said radiation source (8) is a linear electron accelerator or a radioactive isotope.

8. The combined mobile container inspection system according to claim 6, wherein, said radiation source (8) is a linear electron accelerator or a radioactive isotope.